

What is claimed is:

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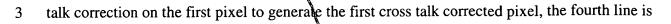
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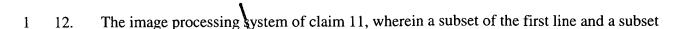
1.	An image processing system operable	to perform c	ross talk	correction t	o a digital i	mage
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having	a plurality of pixels, comprising:	\				

- an image sensor circuitry that is operable to read an image to generate a digital image;
- a processing circuitry communicatively coupled to the image sensor circuitry;
 - a line buffer circuitry, communicatively coupled to the processing circuitry, comprising a plurality of line buffers;
 - the processing circuitry performs cross talk correction on a first pixel contained within a first line comprising a first plurality of pixels to generate a first cross talk corrected pixel, the first line is received from a first line buffer contained within the line buffer circuitry;
 - the processing circuitry uses a second pixel contained within a second line comprising a second plurality of pixels to perform the cross talk correction on the first pixel, the second line is received from a second line buffer contained within the line buffer circuitry; and
 - the processing circuitry receives a third line comprising a third plurality of pixels from the image sensor circuitry.
- 1 2. The image processing system of claim 1, wherein the processing circuitry performs cross
- 2 talk correction on a third pixel contained within the third line comprising the third plurality of
- 3 pixels after performing cross talk correction on the first pixel.
- 1 3. The image processing system of claim 1, wherein the processing circuitry uses a fourth
- 2 pixel contained within a fourth line comprising a fourth plurality of pixels to perform the cross



- 4 received from a third line buffer contained within the line buffer circuitry; and
- a subset of the second line and a subset of the fourth line comprise a cross talk correction
- 6 grid within the plurality of pixels.
 - 4. The image processing system of claim 1, wherein the first pixel, the second pixel and a third pixel within the third plurality of pixels are aligned along a predetermined trajectory within the plurality of pixels of the digital image.
- 1 5. The image processing system of claim 1, wherein the processing circuitry performs multi-
- 2 pass cross talk correction on a fourth pixel contained within a fourth line comprising a fourth
- 3 plurality of pixels, the fourth line is received from a fourth line buffer contained within the line
- 4 buffer circuitry.
- 1 6. The image processing system of claim 5, wherein the first pixel, the second pixel, a third
- 2 pixel within the third plurality of pixels, and the fourth pixel are aligned along a predetermined
- 3 trajectory within the plurality of pixels of the digital image.
- 1 7. The image processing system of claim 5, wherein the processing circuitry uses the first
- 2 cross talk corrected pixel to perform multi-pass cross talk correction on the fourth pixel.
- 1 8. An image processing system operable to perform cross talk correction to a digital image
- 2 having a plurality of pixels, comprising:
- 3 a processing circuitry;
- a line buffer circuitry communicatively coupled to the processing circuitry;

- 5 the processing circuitry performs cross talk correction on a first pixel contained within a
- 6 first line comprising a first plurality of pixels to generate a first cross talk corrected pixel while
- 7 the processing circuitry receives a second line comprising a second plurality of pixels from the
- 8 line buffer circuitry; and
- 9 the processing circuitry uses a second pixel contained within the second line comprising
- the second plurality of pixels to perform the cross talk correction on the first pixel.
- 1 9. The image processing system of claim 8, wherein the processing circuitry receives a third
- 2 line comprising a third plurality of pixels from the line buffer circuitry.
- 1 10. The image processing system of claim 8, wherein the line buffer circuitry comprises a line
- 2 buffer; and
- 3 the second line comprising the second plurality of pixels is contained within the line
- 4 buffer.
- 1 11. The image processing system of claim 8, wherein the processing circuitry performs cross
- 2 talk correction on the first pixel contained within the first line comprising the first plurality of
- 3 pixels while the processing circuitry performs multi-pass cross talk correction on a third pixel
- 4 contained within a third line comprising a third plurality of pixels while the processing circuitry
- 5 receives the second line comprising the second plurality of pixels from the line buffer circuitry;
- 6 and
- 7 the first pixel and the third pixel are aligned along a predetermined trajectory within the
- 8 plurality of pixels of the digital image.



- of the third line comprise a cross talk correction grid within the plurality of pixels.
- 1 13. The image processing system of claim 11, wherein the processing circuitry uses the first
- 2 cross talk corrected pixel to perform multi-pass cross talk correction on the third pixel.
- 1 14. The image processing system of claim 8, wherein the processing circuitry uses a third
- 2 pixel contained within a third line comprising a third plurality of pixels to perform the cross talk
- 3 correction on the first pixel.
- 1 15. The image processing system of claim \(4, \) wherein the line buffer circuitry comprises a
- 2 first line buffer and a second line buffer;
- 3 the second line comprising the second plurality of pixels is contained within the first line
- 4 buffer; and
- 5 the third line comprising a third plurality of pixels is contained within the second line
- 6 buffer.

- 16. A method to perform cross talk correction to a digital image having a plurality of pixels, comprising:
- performing cross talk correction on a first pixel contained within a first line comprising a
- 4 first plurality of pixels to generate a first cross talk corrected pixel;
- 5 receiving a second line comprising a second plurality of pixels while performing the cross
- 6 talk correction on the first pixel; and

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- using a second pixel contained within the second line comprising the second plurality of pixels to perform the cross talk correction on the first pixel.
- 17. The method of claim 16, further comprising using a third pixel contained within a third line comprising a third plurality of pixels to perform the cross talk correction on the first pixel to generate the first cross talk corrected pixel; and
- a subset of the second line and a subset of the third line comprise a cross talk correction grid within the plurality of pixels.
 - 18. The method of claim 16, further comprising performing multi-pass cross talk correction on a third pixel contained within a third line comprising a third plurality of pixels using the first cross talk corrected pixel.
 - 19. The method of claim 16, further comprising storing the first cross talk corrected pixel in a memory location.
 - 20. The method of claim 16, wherein the first pixel and the second pixel are aligned along a predetermined trajectory within the plurality of pixels of the digital image.